

REMARKS

In light of the age of this application, Applicants respectfully request that this amendment be entered and considered by the Examiner at the Examiner's earliest possible convenience.

Applicants have the following comments in support of this amendment and in response to the Office Action.

Claim Amendments – Reference to Disclosure

The amended claims of the present application are directed to certain novel apparatus adapted for imaging tissue. Specific amendments to the independent claims are as follows:

Independent Claims 26, 33, 38 and 41 have been amended to include details concerning crucial aspects of the optical system relevant to in vivo imaging. Specifically, these claims have been amended to include means for imaging to a depth of up to 100 mm within the target tissue. Such capability is unique to Applicants' claimed apparatus, and is described, for instance, in reference to the example illustrated in Figure 9 and on p. 27, line 4 to p. 28, line 5. This example describes apparatus of the present invention adapted to imaging at distance of up to 100 mm into optically scattering media, such as tissue. The example illustrated in Figure 9 shows such apparatus producing a clearly defined excitation at a distance of 40 mm into tissue phantom. A similar example in Figure 10 shows Applicants' apparatus being used for spatially-localized excitation in a block of tumor tissue.

Accordingly, Applicants respectfully submit that the amendments to independent Claims 26, 33, 38 and 41 are not adding any new matter and are clearly supported by the application as filed. Therefore, it is requested that these amendments be entered and considered at this time.

Claim Rejections – 35 USC §103

In the Office Action, the Examiner rejects Claims 26-30, 33-36, 38 and 40-48 under 35 U.S.C. §103(a) as being unpatentable over Denk et al. (USP 5,034,613) in view of Kolobanov et al. (USP 4,973,848) and Dixon et al. (USP 5,192,980). This rejection is respectfully traversed;

While Applicants traverse this rejection, as explained supra, in order to advance the prosecution of this application, independent Claims 26, 33, 38 and 41 have been amended to recite to include means for imaging to a depth of up to 100 mm within the target tissue.

Neither Denk, nor Kolobanov nor Dixon, alone or in any combination, describe any apparatus adapted for imaging any material at a depth of up to 100 mm.¹ Accordingly, even if it were proper to combine these references, the combination still would not disclose or suggest the claimed invention.

Further, it is respectfully submitted that the combination of references is improper. It appears that the Examiner has picked and chosen selected disclosures from references, based on the claimed invention. As stated in KSR:

it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does...because inventions in most, if not all instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.”

Instead, what the Examiner has done is clear hindsight reconstruction, using the claim as a blue print for finding and combining references. Such hindsight reconstruction is improper, and any rejection based thereon improper. See e.g. In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780,

¹ For instance, the microscope objectives of Denk have a focal length of a couple of mm or less, illustrating that apparatus based on the teachings of Denk are not suited to imaging of tissue to depths up to approximately 100 mm. Similar optics are believed to be used by Kolobanov and Dixon.

1784 (Fed. Cir. 1992); In re Oetiker, 24 USPQ 2d 1443, 1444-1447 (Fed. Cir. 1992); KSR, slip opinion at 17. In this case, the Examiner is combining references from unrelated microscope systems to arrive at the claimed invention which is for imaging tissue in vivo. Such a combination to arrive at the claimed invention is improper.

Accordingly, for at least the above-stated reasons, independent Claims 26, 33, 38 and 41 are not obvious in view of any combination of Denk, Kolobanov and Dixon, the rejection based thereon is improper and the claims are patentable over these references. Therefore, it is respectfully requested that this rejection be withdrawn.

Conclusion

For at least the above-stated reasons, it is respectfully submitted that the claims of the present application are in an allowable condition and are patentable over the cited references. Accordingly, it is requested that the application now be allowed.

If any further fee should be due for this amendment, please charge our deposit account 50/1039.

Favorable reconsideration is earnestly solicited.

Respectfully submitted,

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